



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,853	03/18/2004	Shoji Kodama	274.43202X00	5857
24956 7590 11/01/2007 MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			EXAMINER LEWIS, ALICIA M	
			ART UNIT 2164	PAPER NUMBER
			MAIL DATE 11/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/802,853	<b>Applicant(s)</b> KODAMA, SHOJI	
	<b>Examiner</b> Alicia M. Lewis	<b>Art Unit</b> 2164	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,6,9-14,17,18,21-25 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,9-14,17,18,21-25 and 28-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This office action is responsive communication filed on August 15, 2007. Claims 1, 13, 25 and 33 are presently amended, and claims 3-5, 7, 8, 15, 16, 19, 20, 26, and 27 are canceled. Therefore, claims 1, 2, 6, 9-14, 17, 18, 21-25 and 28-35 remain pending in this application.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 25 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US Patent Application Publication 2002/0152339 A1) in view of McGovern et al. (US Patent Application Publication 2005/0097260 A1) ('McGovern').

With respect to claim 1, Yamamoto teaches a system for protecting data on a physical volume at the file system level and permitting access to the data at the physical volume level comprising:

- a first interface for file level input/output (I/O) (paragraph 18 lines 1-5);
- a second interface for block level I/O (paragraph 18 lines 1-4);

a plurality of physical volumes upon which logical volumes are represented (paragraph 7 line 2, paragraph 29 lines 27-30, paragraph 43);

a first controller which processes file level I/O requests (paragraph 7 lines 4-7 and 13-16); and

a second controller which processes block level I/O requests (paragraph 7 lines 4-5 and 13-16),

wherein, in response to a file system protect request directed to a particular logical volume, the particular logical volume is protected for a specified period of time and a physical volume of the particular logical volume is also protected for the specified period of time (paragraph 6, paragraph 7 lines 13-16, paragraph 35, paragraph 39), and

wherein once the particular logical volume is protected, write requests to the particular logical volume or physical volume of the particular logical volume via either the first or second controller are not permitted until expiration of the specified period of time (paragraphs 35, 39 and 47),

wherein information regarding whether or not the particular logical volume is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular logical volume (Figures 5 and 6, paragraphs 43, 45 and 47).

Although Yamamoto uses the term a controller element, it is clear that there are two separate controller elements being used, one for file level and one for block level. For example, he states in paragraph 7 that the controller elements includes at least a SCSI interface for block type read/write requests and a file system interface for file level read/write requests. This interpretation is upheld throughout this office action wherever

Although it is inherent that if a logical volume or physical volume is protected at all, then it is protected for a specified period of time, Yamamoto does not explicitly recite a protect request directed to a logical volume with a specified period of time, nor does he teach wherein said entries include a first status indicating a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume.

McGovern teaches a system and method for record retention date in a write once read many storage system (see abstract), in which he teaches a protect request directed to a logical volume with a specified period of time (paragraphs 21, paragraph 120 lines 19-33, paragraph 121); and a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume (paragraphs 20-21).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Yamamoto by the teaching of McGovern because a protect request directed to a logical volume with a specified period of time and wherein said entries include a first status indicating a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume would enable a method for setting retention

Art Unit: 2164

dates, which in turn locks volumes against modification and/or deletion (McGovern, abstract).

With respect to claim 2, Yamamoto as modified teaches wherein the plurality of physical volumes permits creation of a file system to store archived data (Yamamoto, paragraph 44).

With respect to claim 25, Yamamoto as modified teaches a storage system for protecting data on a physical volume at the file system level and permitting access to the data at the physical volume level comprising:

- a first interface for file level input/output (I/O) (Yamamoto, paragraph 18 lines 1-5);

- a second interface for block level I/O (Yamamoto, paragraph 18 lines 1-4);

- a plurality of physical volumes upon which logical volumes are represented (Yamamoto, paragraph 7 line 2, paragraph 29 lines 27-30, paragraph 43);

- a first controller which processes file level I/O requests (Yamamoto, paragraph 7 lines 4-7 and 13-16); and

- a second controller which processes block level I/O requests (Yamamoto, paragraph 7 lines 4-5 and 13-16),

wherein, in response to a file system protect request directed to a particular logical volume with a specified period of time (McGovern, paragraphs 21 and 121), the particular logical volume is protected for the specified period of time and a physical

Art Unit: 2164

volume of the particular logical volume is also protected for the specified period of time (Yamamoto, paragraph 6, paragraph 7 lines 13-16, paragraph 35, paragraph 39),

wherein once the particular logical volume is protected, write requests to the particular logical volume or physical volume of the particular logical volume via either the first or second controller are not permitted until expiration of the specified period of time (Yamamoto, paragraphs 35, 39 and 47),

wherein information regarding whether or not the particular logical volume is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular logical volume (Yamamoto, Figures 5 and 6, paragraphs 43, 45 and 47), and

wherein said entries include a first status indicating a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume (McGovern, paragraphs 20-21).

With respect to claim 33, Yamamoto as modified teaches a storage system for handling input/output (I/O) requests from a plurality of servers, wherein a first server of the servers sends file I/O requests and a second server of the servers sends block I/O requests, comprising:

a storage media including a plurality of volumes (Yamamoto, paragraph 7 lines 1-2), at least one of the volumes stores data of file system (Yamamoto, paragraph 8 lines 1-2);

a first controller, to be coupled to the first server, conducting I/O operations in response to the file I/O requests (Yamamoto, paragraph 7);

a second controller, coupled to the storage media, to be coupled to the second server, conducting I/O operations in response to the block I/O requests (Yamamoto, paragraph 7); and

wherein at least one volume of the volumes which stores the data of file system is set to be write-protected from the second controller when the first controller received a request from the first server to protect the file system in the storage media for a specified period of time (Yamamoto, paragraphs 35-39 and 47; McGovern, paragraphs 21 and 121),

wherein information regarding whether or not said at least one volume is protected is stored in a volume status table having a plurality of entries which indicate statuses of said at least one volume (Yamamoto, Figures 5 and 6, paragraphs 43, 45 and 47), and

wherein said entries include a first status indicating a retention period of said at least one volume, the retention period indicating how long data in said at least one volume should remain unchanged and thereby determining when data can next be written to the volume (McGovern, paragraphs 20-21).

With respect to claim 34, Yamamoto as modified teaches wherein said first and second controllers share protection information (Yamamoto, paragraph 7 lines 13-16) including status of protection (Yamamoto, paragraph 47) and a retention period for each



Art Unit: 2164

of the volumes which is set at file system level by the first controller (McGovern, paragraphs 20-21).

With respect to claim 35, Yamamoto as modified teaches wherein the first controller receives the file I/O requests via a first interface and the second controller receives the block I/O requests via a second interface (Yamamoto, paragraphs 7 and 18).

3. Claims 6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US Patent Application Publication 2002/0152339 A1) in view of McGovern et al. (US Patent Application Publication 2005/0097260 A1) ('McGovern'), as applied to claims 1, 2, 25 and 33-35 above, and further in view of Brewer et al. (US Patent 6,336,163 B1) ('Brewer').

With respect to claims 6 and 28, Yamamoto as modified teaches claims 1 and 25.

Yamamoto as modified does not teach wherein said entries indicate a second status of each volume defining whether the volume is exported or un-exported.

Brewer teaches a method and article of manufacture for inserting volumes for import into a virtual tape server (see abstract), in which he teaches wherein said entries indicate a second status of each volume defining whether the volume is exported or un-exported (Brewer, column 2 lines 56-60, column 6 lines 24-26).

Art Unit: 2164

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Yamamoto by the teaching of Brewer because wherein said entries indicate a second status of each volume defining whether the volume is exported or un-exported would enable a more detailed tracking of all types of volumes, not just logical volumes, which would add functionality to Yamamoto's storage system (Brewer, column 6 lines 1-3).

4. Claims 9-12 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US Patent Application Publication 2002/0152339 A1) in view of McGovern et al. (US Patent Application Publication 2005/0097260 A1) ('McGovern'), as applied to claims 1, 2, 25 and 33-35 above, and further in view of Achiwa et al. (US Patent Application Publication 2003/0009438 A1) ('Achiwa').

With respect to claims 9 and 29, Yamamoto as modified teaches claims 1 and 25.

Yamamoto as modified does not teach wherein said first controller is a network attached storage controller which processes file level I/O requests.

Achiwa teaches a method for file level remote copy of a storage device (see abstract) in which he teaches wherein said first controller is a network attached storage controller which processes file level I/O requests (paragraph 38).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Yamamoto by the teaching of Achiwa

Art Unit: 2164

because wherein said first controller is a network attached storage controller which processes file level I/O requests would enable processing of file or directory level access requests (Achiwa, paragraph 8).

With respect to claims 10 and 30, Yamamoto as modified teaches wherein said second controller is a disk controller which processes block level I/O requests (Achiwa, paragraph 93).

With respect to claims 11 and 31, Yamamoto as modified teaches wherein said first interface is an Ethernet interface which processes file level I/O requests (Achiwa, paragraph 96).

With respect to claims 12 and 32, Yamamoto as modified teaches wherein said second interface is a Fibre Channel interface which processes block level I/O requests (Achiwa, paragraph 93, paragraph 98).

5. Claims 13, 14, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1), and further in view of McGovern et al. (US Patent Application Publication 2005/0097260 A1) ('McGovern').

With respect to claim 13, Hoogterp teaches a storage system for protecting data on a physical volume at the file system level and permitting access to the data at the physical volume level comprising:

a network attached storage (NAS) gateway (Figure 4, paragraphs 27 and 52);

and

a storage system which is connected to said NAS gateway (Figure 4, paragraphs 52 and 55),

wherein said NAS gateway comprises:

a first interface for file level I/O (element 168 in Figure 4, paragraph 52);

a third interface for block level I/O (element 169 in Figure 4, paragraphs 52-54), and

a first controller which processes file level I/O requests (paragraph 56);

wherein said storage system comprises:

a second interface for block level I/O, said second interface being connected to said third interface (paragraph 34),

a plurality of physical volumes upon which logical volumes are represented (paragraph 62);

a second controller which processes block level I/O requests (paragraph 34); and

wherein once the particular logical volume is protected, write requests to the particular logical volume or physical volume of the particular logical volume via either

the first or second controller are not permitted until expiration of the specified period of time (paragraph 150).

Hoogterp does not explicitly teach wherein, in response to a file system protect request directed to a particular logical volume with a specified period of time, the particular logical volume is protected for the specified period of time and a physical volume of the particular logical volume is also protected for the specified period of time.

Yamamoto teaches a direct access storage system with combined block interface and file interface access (see abstract), in which he teaches:

- a first interface for file level input/output (I/O) (paragraph 18 lines 1-5);

- a second interface for block level I/O (paragraph 18 lines 1-4);

- a plurality of physical volumes upon which logical volumes are represented (paragraph 7 line 2, paragraph 29 lines 27-30, paragraph 43);

- a first controller which processes file level I/O requests (paragraph 7 lines 4-7 and 13-16); and

- a second controller which processes block level I/O requests (paragraph 7 lines 4-5 and 13-16),

wherein, in response to a file system protect request directed to a particular logical volume, the particular logical volume is protected for a specified period of time and a physical volume of the particular logical volume is also protected for the specified period of time (paragraph 6, paragraph 7 lines 13-16, paragraph 35, paragraph 39), and

wherein once the particular logical volume is protected, write requests to the particular logical volume or physical volume of the particular logical volume via either the first or second controller are not permitted until expiration of the specified period of time (paragraphs 35, 39 and 47),

wherein information regarding whether or not the particular logical volume is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular logical volume (Figures 5 and 6, paragraphs 43, 45 and 47).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoogterp by the teaching of Yamamoto because wherein said first and second controllers share protection information for said logical and physical volumes would enable a storage system with direct access storage devices that could be shared between a block interface and a file interface (Yamamoto, paragraph 6).

The combination of Hoogterp and Yamamoto does not teach a protect request directed to a logical volume with a specified period of time or wherein said entries include a first status indicating a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume.

McGovern teaches a system and method for record retention date in a write once read many storage system (see abstract), in which he teaches a protect request

Art Unit: 2164

directed to a logical volume with a specified period of time (paragraphs 21, 120 and 121); and a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume (paragraphs 20-21).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of McGovern because a protect request directed to a logical volume with a specified period of time and wherein said entries include a first status indicating a retention period for the particular logical volume, the retention period indicating how long data in the particular logical volume should remain unchanged and thereby determining when data can next be written to the particular logical volume would enable a method for setting retention dates, which in turn locks volumes against modification and/or deletion (McGovern, abstract).

With respect to claim 14, Hoogterp as modified teaches wherein the plurality of physical volumes permits creation of a file system to store archived data (Yamamoto, paragraph 44).

With respect to claim 17, Hoogterp as modified teaches wherein said entries indicate a second status of each volume defining whether the volume is protected or unprotected (Yamamoto, paragraph 47).

With respect to claim 24, Hoogterp as modified teaches wherein said second interface is a Fibre Channel interface which processes block level I/O requests (Hoogterp, paragraph 34).

6. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1) and McGovern et al. (US Patent Application Publication 2005/0097260 A1) ('McGovern'), as applied to claims 13, 14, 17 and 24 above, and further in view of Brewer et al. (US Patent 6,336,163 B1) ('Brewer').

With respect to claim 18, Hoogterp as modified teaches claim 13.

Hoogterp as modified does not teach wherein said entries indicate a second status of each volume defining whether the volume is exported or un-exported (Brewer, column 2 lines 56-60, column 6 lines 24-26).

Brewer teaches a method and article of manufacture for inserting volumes for import into a virtual tape server (see abstract), in which he teaches wherein said entries indicate a second status of each volume defining whether the volume is exported or un-exported (Brewer, column 2 lines 56-60, column 6 lines 24-26).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Brewer because wherein said entries indicate a second status of each volume defining whether



Art Unit: 2164

the volume is exported or un-exported would enable a more detailed tracking of all types of volumes, not just logical volumes, which would add functionality to Hoogterp's system (Brewer, column 6 lines 1-3).

7. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1) and McGovern et al. (US Patent Application Publication 2005/0097260 A1) ('McGovern'), as applied to claims 13, 14, 17 and 24 above, and further in view of Achiwa et al. (US Patent Application Publication 2003/0009438 A1) ('Achiwa').

With respect to claim 21, Hoogterp as modified teaches claim 13.

Hoogterp as modified does not teach wherein said first controller is a network attached storage controller which processes file level I/O requests.

Achiwa teaches a method for file level remote copy of a storage device (see abstract) in which he teaches wherein said first controller is a network attached storage controller which processes file level I/O requests (paragraph 38).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Achiwa because wherein said first controller is a network attached storage controller which processes file level I/O requests would enable processing of file or directory level access requests (Achiwa, paragraph 8).

With respect to claim 22, Hoogterp as modified teaches wherein said second controller is a disk controller network attached storage controller which processes block level I/O requests (Achiwa, paragraph 93).

With respect to claim 23, Hoogterp as modified teaches wherein said first interface is an Ethernet interface which processes file level I/O requests (Achiwa, paragraph 96).

### ***Response to Arguments***

8. Applicant's arguments filed August 15, 2007 have been fully considered but they are not persuasive.

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., denying access to stored data from another I/F such as the block I/F) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *See In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, Yamamoto teaches in paragraph 47 that logical volumes may be inaccessible (protected) from certain types of access. Therefore, Yamamoto does teach protecting volumes for periods of time from access.

Art Unit: 2164

10. Applicant also argues that McGovern does not truly teach a WORM-protected volume. Although this is not specifically recited in the claim, McGovern does in fact teach a WORM-protected volume. McGovern teaches in paragraphs 21 and 121 that in "strict or regulatory" WORM volumes, certain rules may apply. For example, he teaches that the above type of WORM volumes are subject to strict minimum retention periods or infinite retention periods wherein no modification or deletion of **files** is permitted. Therefore, under the regulatory WORM volumes taught by McGovern, file system protect requests with specified periods of time are present, in which the entire volume (all files) are protected for the specified time period.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2164

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alicia Lewis  
October 27, 2007

  
SAM RIMELL  
PRIMARY EXAMINER